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DISCOURSE  
ON THE  
WISDOM and GOODNESS  
OF  
G O D  
IN THE  
FORMATION of MAN.

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## A DISCOURSE, &c.

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PSALM 139, Ver. 14.

*I will praise Thee, for I am fearfully and wonderfully made.*

**N**OTHING is more likely to give us strong impressions of the wisdom and goodness of the Creator, and to produce in our minds proper sentiments of gratitude and piety, than a serious consideration of the make and frame of the human body ; which, upon an examination of its principal parts, will be found to be “ fearfully and wonderfully made.”

The first thing which strikes us in considering the body of man is its ERECT POSTURE ; which seems most suitable to him who hath dominion over other creatures. This posture is best adapted to support the head, which, being heavy from the quantity of

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brain,

brain, would, in any other position, have been painful and wearisome from its weight : It is also most convenient for looking about us, as we can easily turn our eyes upwards, or downwards, or around us, and see far before us, which is of great advantage in discovering what we seek, and in avoiding danger : It is, indeed, the best and safest posture that could be contrived for man ; most agreeable to all his labours and all his occasions.

The wisdom of the Creator may also be observed in the *stature and size* of the body of man. Had man been weaker and smaller, he would not have been able to manage the inferior creatures, or to transact a great part of his necessary business ; had he been much stronger, he would not, probably, have made the use which he now does of his reason, and might have been a dangerous tyrant in the world ; Had he been much larger, he could not have been so well supplied with food ; nor, if the creatures who feed him had been made proportionably larger, would there have been grass sufficient to support them. Man's relation, therefore, to the rest of the creation is alone a sufficient reason why he was not made larger and stronger.

But let us more particularly examine the disposition of the different parts of our bodies, and we shall



shall find that there is nothing, from the crown of the head to the sole of the foot, that hath not its appropriate use ; nothing that we could conveniently live without ; nothing which does not prove the wisdom and goodness of the Creator.

Of all the visible parts of man's body, the HEAD holds the first rank, not only on account of its beauty, but as it is the seat of the senses : Hence the eyes perceive, as from a watch tower, things at a distance ; here the ears draw in sounds, and the nostrils receive the ascending odours. Being intended to contain the brain, which is the fountain of all sense ; upon which depends whatever privilege belongs to us as reasonable creatures, (*a*) and which, in man, is larger, in proportion to the size of his body, than in any other creature ; the head is nearly round ; which is a shape fitted to contain the greatest quantity, and is covered with a hard, tough substance, which we call a *Skull* ; composed of various bones, joined together by many sutures, or seams ; and, from being thus divided, not so liable to be fractured, or to have the fractures so far extended as if it was composed of one bone only. It is also covered with skin, and ornamented with HAIR : And  
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(*a*) The brain may, in some cases, be much injured, and yet the *animal* may live ; but all the actions of rational life are ended, and the MAN is dead.

an attentive observer of the works of God will discover the divine wisdom in the hairs of the head, as readily as he will in other parts of the human body. They contribute much to the beauty of the face, (and that, perhaps, is their smallest use) they preserve the head from cold; relieve the brain from an abundance of moisture; weaken the force of any stroke that might endanger the head, (*b*) and, being very light, are by no means troublesome. They may serve for other purposes; but these are sufficient to prove the wisdom and goodness of the Creator.

The formation of the EYE of man is more astonishing than any thing of which the human understanding has any perfect knowledge; nor does any part of the human frame more clearly testify the wisdom of the Creator: it is formed with equal excellence and elegance: is so curiously composed, and so conveniently situated that nothing could be contrived better for use, ornament or security. It is placed in the uppermost part of the body, near the most sensible part, the brain, to give friendly warning of the approach of danger; and it turns, with

(*b*) The hinder part of the skull is harder and stronger than the other parts of it; for this, perhaps, amongst other reasons; that, if a man falls upon his head backwards, there is nothing to help and defend him.

with the greatest ease, every way, which renders our two eyes as useful as a thousand: And, for the assistance of the eye, the head moves readily to receive the light.

The disposition of the outward parts of the eye is truly admirable. It is placed in the head, as the most convenient part for security and defence, at a proper depth, in a well-formed socket; securely inclosed on all sides, and guarded from injury, by hard, solid bones.

The EYE-BROWS also contribute much to the safety and preservation of the eye, which is of so delicate a frame that the slightest touch might injure it. The short, stiff hairs, which form an arch over the eye, break the too fierce impression of the rays of light; and prevent drops from the forehead, dust, or other annoyances from falling into it. Hence we may learn how graciously attentive the Creator hath been to the very minute particles of our body.

The EYE-LIDS also which are formed of a thin, flexible, but strong skin, are an admirable protection to the eye, as they screen it from too strong a light in the day time; whilst the hairs round their edges serve as a fan to keep off flies, gnats, or other troublesome insects: And these hairs never growing longer

longer than they were at first, and being set thin, do not, in any degree, prevent or injure our sight. And as it is necessary that men should Sleep; (c) which could not so well be done if the light interrupted our rest, therefore the Creator hath appointed these curtains, which close of their own accord, to keep it out, and to shield the eyes from injury during the night.

And because, if the eye always stood open, it would grow dry, shrink, and lose its clearness, therefore the eyelids are lined with a very fine and soft sponge, moist with its own dew; and are so contrived as often to wink, that they may keep the eye moist, and at the same time wipe off any dust, or  
filth

(c) There is not any thing in the constitution of man more wonderful than Sleep. That a body fatigued with labour should, at a certain period of time, resign itself to inaction, lose all its voluntary powers, and yet preserve all its animal functions; that it should, at another regular period, spontaneously shake off this inactivity and recover its original spirit and vigour, entirely refreshed, and restored to all its former faculties; that this suspension of attention and incapacity of motion should so regularly take place, and produce such extraordinary and amazing effects, is most justly to be considered as one of those secrets of nature which we are every day familiar with, as to the effect, and yet are entirely ignorant of as to the cause.



filth that may stick to it ; and this, lest they should hinder the sight, is done so quickly that, when we would express inconceivable swiftness, we commonly say in the twinkling of an eye.

As it is necessary that the eye should be uncovered, and exposed to the air in all weathers, the most wise Author of Nature hath provided for it a warm bed of fat ; which renders it less sensible of cold than other parts. The outward coat of the ball of the eye is also made so thick, tough and strong, that it is proof against all common inconveniencies and annoyances ; and is so slippery that it easily escapes the force of a stroke ; in which also it is much assisted by its roundness : And for the greater safety, our Heavenly Father hath made it so precious to us, that the object of our fondest love cannot be more dear to us than the apple of our eye.

In short, the eye alone abundantly proves that it is the work of an all-wise and all-gracious Maker ; who has suited so well to all our occasions, and fitted for our necessary services a part of our bodies which is as curious as it is useful ; and the loss, or defect, of which we lament as one of our greatest misfortunes : For the eye is to man what the sun is to the world, its light and its guide ; without which we should live (if we could live at all) in continual darkness,

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be exposed to continual wants, and suffer continual distress ; and, on this account, to pluck out the eye was an ancient proverbial expression, to signify the loss of those things that were most dear and precious unto us. (*d*)

Next

(*d*) There are some, seemingly unhappy persons, who have never perceived that first made, because most necessary, creature of God, the light ; whose eyes have been sealed up in darkness from their birth. One season passeth away, and another cometh, but the different beauties of the seasons afford them no variety ; nor do they taste the delightful satisfaction of discovering each day in the works of the Creator new reasons for praising his power, his wisdom, and goodness. It may, however, be some consolation to those who have lost the privilege of sight, to consider that they have at the same time lost the dangerous view of many vanities that seduce the heart ; that much sin and much misery is hidden from their eyes ; and that when the mind is not distracted by a variety of objects, it may attend more closely to the care of salvation, and look forward, with the eye of faith, more earnestly to that awful hour, when a voice from Heaven shall call forth the blind from the darkness of the grave, saying, “ Arise, for your light is come, and the glory of the Lord is risen upon you. The sun,” which you sought in vain to behold, “ shall not be your light by day, nor the moon by night, but the Lord shall be unto you an everlasting light, and your God your glory.”

Next to the eye, let us consider the EAR : “ The seeing eye and the hearing ear, the Lord hath made even both of them.”

The EAR, indeed, in respect to beauty, must give place to the eye ; but it is no less a masterpiece of the Creator's hand. Like the eye, the ear is placed in the head ; and being always open, (hearing being a sense necessary to us when sleeping) gives us information of what the eye cannot discover. It is of a form proper for the erect posture of man ; placed in a situation where it is most free from injury, and gives no hindrance to any other part. It is open night and day to convey every impression of sound ; by its extreme delicacy it catches even the softest whisper, and hath various curious hollows to retain the sounds for some time.

The make of the ear bears evident tokens of great wisdom. The outward part, which is most exposed to injuries, is of a firm, gristly substance. Had it been soft, like flesh, it would not have remained open, or so well have received and conveyed the sounds ; would have hung down ; interrupted our hearing ; and been more liable to bruises. Had it been bone, it would have been inconvenient to us when we lie down ; and might, by many accidents, have been broken.

The entrance to the ear is furnished with little hairs, which serve as a bar to prevent insects from entering ; and, for the same purpose, the ear is moistened with a clammy, bitter wax, which is distasteful to every insect. The passages from this outward part are curiously smooth, various and winding ; to prevent the hasty entrance of any thing that might hinder the hearing ; to retain the sound, that it may be more distinct ; and to secure the inward parts from the sudden entrance of air too warm, or too cold ; and from disagreeable noise : They are also narrow, to prevent the spreading, and, of course, weakening the sounds which are received, and conveyed through several arches ; which soften them in their passage, that they may strike agreeably on the ear.

By the ear we gain our first notions of words, and teach our infant tongue to frame them ; by the ear, we are informed of things which we cannot discover by our other senses ; by the ear we partake in the charms of music, and the various pleasures and advantages of conversation ; by the ear we hear the glad tidings of the gospel, and shall hear the trumpet sound to awaken the dead to life and immortality. (e)

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(e) As it is of service to men, in general, that they should not want occasional examples of the defects to which



And as God has given us a seeing eye, and a hearing ear, so hath he also given us a speaking TONGUE ; which places us in a rank very superior to the brutes, and is a faculty which the Creator has bestowed on man alone. By speech we are enabled to communicate our thoughts with ease and advantage ; to impart our pleasures and lessen our sorrows ; to ask counsel and assistance, or to give it to those who want it. As, therefore, (*f*) God hath graciously distinguished us by the power of speech, let us be careful to make this precious gift a means of instruction ; a bond of society ; and a source of pleasure ; by glorifying God, and instructing and comforting our fellow-creatures.

The tongue also serves for other uses : It is a necessary assistant in the chewing and swallowing of our food ; it is the grand instrument of taste ; the faithful

which the human body is liable, God is sometimes pleased to deny the sense of hearing to some of their fellow-creatures ; in order that they may learn properly to value the blessing ; may take the greater care to preserve it ; and prove their gratitude by making a good use of it.

(*f*) The variety or difference of voice and speech is a remarkable instance of the providence of God, and of very great advantage to mankind ; as it prevents much disorder and confusion, and thereby enables persons in the dark, and even those who are blind, to know and distinguish each other.

faithful judge of all our nourishment ; by which we discover the good or bad qualities of our food, what is convenient or inconvenient for our support : For it is a kind instance of the care of the Creator, that the food which is unfit for nourishment, or destructive of health, is also in general disagreeable to the taste and stomach ; whilst that which is most conducive to nourishment, and proper to preserve our bodies in a healthy state, is both pleasant to the taste, and agreeable to the stomach ; and continues to be so 'till our hunger and thirst are appeased ; after which it begins to be less pleasant, and, at length, even nauseous. This sense, therefore, is not only a source of pleasure, but an inducement to temperance, and a security to our health.

In short, the tongue is an invaluable instrument, without which we should want many of the advantages that we enjoy as reasonable creatures : And, as it was formed to be the interpreter of the heart, this should teach us that we ought not to speak one thing and mean another.

Let us also consider the TEETH ; the peculiar hardness of which ; their firm insertion in the jaws ; and their different shape and strength, suited to their various uses ; are evidently a wise contrivance for  
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our benefit. The Fore teeth (*g*) are broad, with a thin, sharp edge ; that they may, with the greater convenience, cut and divide the food, and prepare it for the others. Next to these are placed another sort, commonly called the Eye teeth ; more pointed, deeper rooted, and stronger than the former ; because they break the food, and, with the jaw teeth, grind and mince it, and give it the last preparation for the stomach.

If the teeth were covered, like other bones, with a web of small threads, or membrane, chewing would occasion much pain ; and, if they were quite naked and exposed to the air, they would soon decay (for no bone will bear the air) to prevent both which inconveniencies they are covered, so far as they are exposed to the air, with a neat enamel, harder than the bone itself ; which prevents any pain from chewing, and secures them from various injuries ; and, as soon as they lose this, they decay.

And here we may observe, as an instance of the wisdom of Providence, that children, who live for a considerable time on milk, have, for some months, no teeth ; as they would serve only to hurt themselves

(*g*) It is to be observed that these fore teeth also assist the speech.

selves or their nurses ; but that, at the very age when they can take in more substantial food, and begin to want teeth for the sake of speech, teeth begin to appear, and grow gradually as the children stand more in need of them : Indeed, they only, of all the bones continue to grow in length (or, at least, their enamel does) during life ; which is a providential appointment to repair the waste occasioned by constant use.

The NOSE not only contributes to the beauty of the countenance, but assists also in forming the voice ; draws in and lets out the breath of life ; and relieves the head from any thing that may oppress it : (*b*) And, to prevent any thing hurtful from entering the breathing passages during sleep, hairs are placed at the extremity of the nostrils ; which are formed not of flesh, but of gristle, that they may more readily be kept open, and, as occasion requires, be dilated or contracted : Wide at the bottom the better to receive the ascending fragrance, and

(*h*) The Creator hath kindly appointed many ways to discharge what might be hurtful to us. If any thing oppresses the head, it hath a power to relieve itself by sneezing ; if any thing injurious fall upon the lungs, they can, generally, remove it by coughing ; and should any thing clog the stomach, it has a power to contract itself, and throw off whatever is offensive.



and narrow at the top that, when entered, it may act more strongly.

The nose is also the instrument of *smelling*, by which we enjoy the perfumes and sweets of nature, which are thus sent to the brain for its refreshment. And as our food passeth through the mouth into the stomach, the organ of smell is placed immediately above it, to prevent its receiving any thing corrupted.

The FOREHEAD is a singular ornament, full of grace and majesty, it is the index of joy or sorrow ; of severity or mildness ; of shame or of impudence ; and the swelling forward of this part is useful ; as it conveniently shades the eyes, and keeps off an excess of light, which might, perhaps, be some hindrance to the sight.

The CHEEKS, the largest portion of the human face, contribute greatly to its beauty ; they are the chief seat of blushing, that mark of virtuous modesty : Hither, on the consciousness of any unbecoming action, the heated blood ascends, and displays the ruddy ensigns of shame. And this flushing of the blood in the cheeks on the violation of modesty, or even on the apprehension of having violated it, is one of the greatest amongst all the  
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wonders of our frame : for what is it but God's declaring to us that we shall not offend against this virtue without publishing our shame to all around us ? What is it but making the very blood in our bodies the guardian of our virtue ; hurrying it into the face by unknown channels ; by a power that cannot be accounted for, and in a manner incapable of being explained ?

The LIPS are formed to cover the mouth, gums, and teeth, and to be a guard to the latter ; they serve also for forming the voice, and rendering the speech distinct and easy : They are also particularly useful in tasting, and preventing the food, when chewed, from falling out of the mouth.

The CHIN is a peculiar ornament to the face ; and is a part with which no animal is furnished but man.

The MOUTH, the seat of smiles, is formed hollow and capacious that it may not only receive, but retain the food, till it is properly prepared for the stomach. With the mouth also we take in the air ; convey it to the lungs ; and form our speech : And it contains a small piece of spongy flesh, called the UVULA, hanging from the palate to the opening of the windpipe : the uses of which are, to prevent the

the cold air from entering too hastily into the lungs : to assist in forming the voice, and hinder what we drink from being thrown back from the mouth into the nostrils. When we consider this little part, we cannot but say, “ those parts of the body which seem to be more feeble are necessary.”

Let us next consider that forepart of the head which is always exposed to view, and is called the FACE, or COUNTENANCE ; the features of which make one of the greatest distinctions between men and brutes : For either brutes have no face, strictly and properly so called ; or it doth not look forward as man's doth. Here the image of the mind is most especially to be discerned, God having imprinted on the features of the countenance characters which are, generally, the faithful interpreters of the soul. When the mind is at peace, the countenance gives true information of what passes within, and appears in a state of tranquillity ; but, when the mind is disturbed, the countenance becomes a lively picture wherein the passions are strongly painted, and those secret agitations, which we greatly wish to conceal, are betrayed : And thus, whilst the tongue is vilely employed in dissimulation, the hypocrisy will, generally, be read in, that ever-open book, the countenance. Here also we may observe the symptoms of health, of disease, or death.

And the wonderful variety of men's countenances (*i*) is a great argument of the wisdom and goodness of the Creator. Although the parts which compose the human face are few, and are all disposed on the same plan, yet there are not two faces exactly alike; there is something in each to distinguish it from another. And this variety of features evidently appears to have been contrived for the benefit of mankind: For, if the faces of men so exactly resembled each other that they could not be distinguished, this would occasion continual confusion, mischief, and fraud in the world. We should experience the vexation of endless uncertainty in all our transactions with each other; should

(*i*) To this great variety of men's faces may be added two other striking instances of God's providence; in the variety of voices, though the organs of speech are the same; and in the difference of hand-writings; where, though thousands are taught by the same master, and in the same method, there shall be something peculiar in the writing of every one to distinguish it. Thus, as every man's face distinguishes him in the light, so does his voice in the dark; and his hand-writing can speak for him, though absent, and secure his contracts to future generations. And it is to be observed that these things (without which society could not subsist) are not the effect of human agreement; but the wise and gracious appointment of the providence of God; who regardeth what is for the good of mankind in general, and of every private person,



should not be secure of our lives, or the quiet possession of our property ; there would be no justice between man and man, as magistrates could not distinguish the guilty ; because malefactors, though seen never so plainly, could not be known, if they were once lost sight of : and thus villainies of every kind would be committed without any risque of discovery ; and society would speedily be dissolved.

Let us now proceed to consider the NECK and BREAST of man.

The NECK unites the head to the body, and covers the throat, which is furnished with two pipes most admirably contrived : The first is placed in the fore part of the neck ; is wonderful in its formation, and called the WINDPIPE. By this air is taken in, and breathed forth ; and, because a continual respiration is necessary to the support of life, it is formed of stiff, gristly rings, to keep it constantly open, and prevent the sides from falling together. And that, when we swallow, nothing might fall into the windpipe, and prevent our breathing, the Allwise Creator hath added a cover (*k*)  
to

(*k*) Let any one observe the upper part of the windpipe in a sheep, and he will see a cover, which, being pressed

to the top of it, over which every thing that we eat and drink passes, before it can be conveyed into the passage for the food, called the GULLET ; which cover prevents meat or drink from entering it : So that it is absolutely necessary, if we would eat with ease, and preserve life at the same time, that the windpipe, or the mouth of it, should be closed when we swallow ; otherwise many things might enter it, whilst we eat, drink, or sleep, which would occasion violent coughing, straining, or even instant death. Thus this important pass is always secured against any noxious approaches ; yet, respiration being absolutely necessary, this cover opens immediately after swallowing our food ; because if it remained in the mouth of the windpipe, the breath would be stopped, and we should instantly be suffocated.

It should further be observed that, for the more convenient bending of our neck, the windpipe is composed not of one continued gristle, but of many, strongly joined together.

The GULLET, or passage through which food passes, is placed behind the windpipe, and leads directly to

pressed down by the food when it is swallowed, closes the opening of the windpipe ; so that the food passing over it, as over a bridge, is prevented from falling into it.

to the stomach. Both these pipes are so necessary that, without the one, we can neither breathe nor speak ; and without the other, we cannot receive the food necessary to our support.

These are the passages to the BREAST, which is guarded by ribs, composed of hard and strong bones ; but, not being intended to bear any great weight, they are broad and thin, that they may bend and give way without breaking : And it is an instance of the kind care of Providence that after having been bent they have a power of returning to their former shape again. Formed into a regular arch, they are gently moveable for the act of breathing ; and they compose a safe lodgment and fence for, those important organs of life, the LUNGS and the HEART.

The LUNGS are the great instrument of breathing, the necessary organs of speech ; they are of a spongy substance, and, considering their size, the lightest part of the body ; being formed of a great number of hollow pipes to receive air, with which they are alternately filled and emptied : at each filling, they enable the blood to extract from it the PRINCIPLE OF HEAT, which is absolutely necessary to life ; and, at each emptying, they, by means of the same air, carry off from the blood a noxious vapour,

vapour, which, if it accumulated, would soon prove fatal: so that breathing seems ordained by the Allwise Creator for the purpose of communicating one principle necessary to life; and of removing another principle (its direct opposite) which would destroy life: this operation, therefore, is equally admirable and incomprehensible. And that the Lungs may be firm and steady, and perform their operation with greater certainty and accuracy, they are fastened to the spine, or back-bone, and thereby become fixed. This should teach us that the lungs are the work of a Creator who doth all things wisely; and that it is our duty to bless and praise Him who hath breathed into our nostrils the breath of life, and, amidst a thousand accidents, continues to preserve it.

The HEART is the first part that lives, and the last that dies in man; it is the distributor of natural heat, and of the blood, that vehicle of life, throughout the whole body by its continual motion, called its circulation: For, even when all the other members are at rest, the heart is in perpetual motion, from the first moment of life to the last.

The heart is placed almost in the middle of the body; but, because it is more difficult for the blood to ascend than descend, something nearer to the head.



head. Its flesh is the firmest and most solid of any in the body ; and it is covered with an exceedingly strong membrane, which keeps it in its place, without interrupting its office ; prevents its rubbing against the lungs ; contains a liquor which keeps the surface of it moist, smooth, and slippery, and thereby enables it the more readily to perform its necessary functions. And, for the greater security, the heart is lodged within the soft bed of the lungs (which are called by some the heart's pillow), is encompassed with a fence of bone, and protected also by the shoulder blades and the back-bone. The heart moves more than three thousand time in an hour without ceasing, whether we wake or sleep ; and continues, during sixty, seventy, or eighty years, strong, active, and unwearied ; equally a stranger to rest or fatigue : And this motion is performed without our consent, or without our being sensible of what passes.

The lungs and the heart are separated from the stomach, and other lower bowels, by a strong skin called the MIDRIF, which assists in relieving the bowels ; and, next to the lungs, is the principal instrument of breathing. This part of the body is supposed also, by some, to be the cause of laughter, which is peculiar to man ; which contributes to relieve the uneasiness of grief, and, by banishing

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savageness

lavageness of temper, renders society more agreeable.

The STOMACH is large and hollow, in order to contain at once sufficient food for nourishment ; and the inner part has many folds, so formed as to prevent the food from passing through it too soon. Its operation is truly amazing ; as, in the course of three or four hours, the hardest and toughest meats are changed into a soft milky juice, which could scarcely be effected, during that time, in a pot, over a fierce fire. This work of digestion is performed every day, without our knowing how, and without our being able to prevent it : And that whatever is taken into the stomach is thus suddenly consumed is a most wise appointment of the Creator for the support and nourishment of the body : For, as the body, by its motions and employments, must suffer a continual waste, it was necessary that this waste should be repaired ; some parts of it, therefore, were necessary to receive nourishment ; others to grind it, to separate the juices, and distribute them through the whole, as every part hath need.

The stomach hath also, after digestion, a power of extending or contracting itself, according to the quantity

quantity of food received, and of throwing off any thing that clogs it.

We may also observe that the wise Creator hath added, to the other uses of the stomach; a pain felt from fasting; by which we are reminded of our want of food and refreshment; of which, without such a warning, we might, through laziness, or variety of business, often not be sensible, till we became weak, faint, and, from want of support, unfit for business. (*m*)

The general use of the BOWELS is very observable, and worthy of their great Author: they were intended to retain the food a considerable time, in order to its better digestion; and the many turnings and foldings of them were framed by the provident Creator for this purpose; and, notwithstanding all these turnings and foldings, they are

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fastened

(*m*) It is a remarkable instance of the wisdom of Providence that pleasure is annexed to, the two supports of life, eating and drinking: For to be obliged to chew and swallow food daily, and to find no relish or pleasure in it, would be a very disagreeable task; and, unless Providence had rendered eating and drinking pleasant to us, it is not improbable that many would have neglected it, or, at least, would not have used it in due season and quantity.

fastened in such a manner that it is not possible for the food to take a wrong direction. By means of these various turnings the food remains in the intestines so long, that whatever nourishment it contains may be drawn out before it leaves the body ; Without these, it would pass off too speedily, and we should be always hungry.

The BELLY, which contains the bowels, is not encompassed with bones, like the breast, but left free for the necessary reception of food, and for the more convenient bending of the body. Thus the care of the Creator is every where to be seen ; and no one can consider this part of the human body without grateful acknowledgment of his wisdom and goodness.

How the heart and the lungs are put in motion ; how the stomach and bowels digest food for our nourishment and growth, we are wholly ignorant ; as we are of very many other motions of which we receive the benefit without understanding the manner in which they are performed : But, though we know not the cause of these motions, we cannot but admire the wisdom and power of the Creator in beginning and continuing them.

Here



Here we may observe that the lungs, the heart, the stomach, and the bowels, are, besides their other guards, protected by the ARMS; which are very conveniently placed to fence off any violence.

The ARMS, which are the ministers that serve, the guards that defend the body, are placed near the chest, where the body is the strongest; and, without being too far from the lower parts, are most conveniently situated for every kind of exercise and work, as well as for the protection of the other members; firm with bone, yet not weighty with flesh, they bend inwards and outwards, move upwards or downwards readily, as occasion requires.

The HAND, which is annexed to the arm, is a striking proof of the wisdom of God; it is the sceptre by which man ascertains his dominion over other creatures; is fit for every purpose; capable of every exertion, and of adapting itself to every species of industry. This precious instrument is divided into four FINGERS bending forward, and one opposite bending backwards, and of greater strength than any of them singly, to join with them separately or united; whereby the hand is enabled to lay hold of, to raise, or push away, objects of different sizes. These fingers are strengthened

ened with bones, having joints so flexible that our fingers are opened and closed without any difficulty, and we are thereby enabled to open or contract them, and firmly to seize any thing.

The ends of the fingers are also strengthened with NAILS, which serve not only for ornament and defence, but for various other uses. The skin upon the ends of the fingers being very thin, and of exquisite sense, (to enable us to judge readily of whatever we handle) we should be frequently in pain, (*n*) and our hands would be of little service, if the fingers were not armed with nails, which have no sensation, for preserving so tender a part, as the fingers ends, from injury. Thus, in every part of the human body, the marks of divine wisdom may be seen.

As to the BONES, these pillars of the body, they also well deserve our consideration.

Whatever wisdom may appear in the frame of the human body ; how useful and necessary, soever  
all

(*n*) God hath annexed pain to all injuries of the body, in order to quicken us in the search of speedy remedies ; and to make us careful to avoid every thing that may occasion pain.

all its other parts may be, yet this wonderful machine would scarcely be in a condition to move, if the Creator had not supported it by the stiffness and hardness of bones ; and thus enabled it to perform its proper duties.

Bones, in general, are covered with a thin skin, extremely sensible, to warn us against any annoyance ; light and hollow, that they might not weigh us down ; yet of a firm and solid nature, to give steadiness, uprightness, strength, and beauty to the body. They are most of them larger at each end than in the middle, that the joints (into which the bones are divided, that we may move with more ease) may be firm, and the bones not so easily dislocated : and these joints are so nicely contrived as to render our limbs pliant and ready for every motion, and yet so strong as not to be injured by constant use. The marrow with which the bones are filled is likewise of singular use ; as it supplies an oil, to keep them moist, without which they would grow dry, stiff, and brittle, and soon crack and break : It serves also to prevent the joints of the bones from being worn, or overheated, by long continued action ; to keep the limbs supple, and contribute to their more easy motion : For, although the ends of the bones are round and smooth, they

they could not, if dry, move with ease. (o) And that we may use our limbs readily ; may stretch out, or draw in our arms ; stoop or rise, as we please ; each bone is set in the hollow of another, and moistened with an oily humour which prevents the gristle that covers it, from being injured. Can we then sufficiently admire the kind providence of the Creator, who has not only fitted all these parts for their necessary motions and employments, but graciously added whatever may preserve them, and render their action easy ?

The bones of the human body, though very numerous, and many of them very liable to be dislocated, or snapped asunder, are yet so well preserved by the power that formed them, that we may truly say, “ God keepeth all our bones, so that not one of them is broken.”

In the neck are many little bones set together in such manner that it may turn or bend with ease.

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(o) We shall be convinced of this, if we recollect that the axles of waggon and mills, clocks and jacks, though never so smooth and polished, can scarcely move unless they are oiled.



The **BACK BONE** consists of several very short bones, knit together by cartilages, or gristles, which readily give way, for the more easy turning of the head, and more convenient stooping, when there is occasion. The form of it is the best that can be contrived; being made tapering, like a pillar; the lower joints broadest and largest, and the upper ones less and less, for the greater firmness and strength. Had it been one, entire, rigid bone, it would have prevented the body from bending as effectually as if a stake had been driven through it; and being of such a length, would often be in danger of snapping asunder; whereas now it is so wisely and strongly united by these joints, that it has the pliancy of willow, with the firmness of an oak.

The bones of the **THIGHS**, (the largest and longest of the whole body) of the legs and feet, support the bones which are above them, and may be considered as the moveable foundation of the body: they have several joints to render their motions easy, and are so formed that, though perfectly commodious for walking, they do not obstruct our sitting.

The **FEET** are the base of the body, which they firmly support, and enable it to move easily and gracefully; they consist of more than thirty bones in

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each,

each, firmly fastened together, and they are most wisely contrived to answer their various uses.

The **TORS** also contribute to the support of the body, as they fix the feet firmly on the ground.

**FLESH** is appointed to clothe the bones, and to guard and secure the inward parts ; and, being soft and flexible, is further serviceable to give proportion and comeliness by filling up the skin. And it is given us not only for ornament, but for ease and rest ; it is a soft bed of itself ; it renders sitting or lying down easy, and promotes rest and sleep. Flesh also answers a still more important purpose ; as those fleshy substances, the **MUSCLES**, by which all motion is performed, possess a power of lengthening, or shortening, the fibres, or threads, of which they are composed, in a manner which not only sets all human contrivances at an infinite distance, but (notwithstanding the perpetual evidence of our senses) almost exceeds belief. Thus, if we wish to move the hand, or foot, it instantly moves obedient to our wish ; an effect which exceeds the comprehension of man, and is a convincing proof of the existence of a superior Being ; without whom we should have no more power to move a limb, by a mere thought, than we have to move the sun.

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And yet how few are there who reflect on these things, or raise their thoughts to HIM who hath disposed these minute fibres so wisely as that all the variously parts may spontaneously perform their motions without interfering with each other? Surely we must be equally ignorant and ungrateful if we do not acknowledge and adore the God who hath not only thus “fearfully and wonderfully” formed our body, but moves it continually by the concurrence of a prodigious number and variety of muscles, which readily answer every purpose, and instantaneously comply with every motion of the will. In flesh, therefore, as in the other parts of the body, we see plain proofs of the wisdom and goodness of God.

FAT also cherishes and keeps the body warm; serves for the defence and security of some parts; renders the motion of others more easy; makes the surface of the body smooth and beautiful; and supplies, as there is reason to suppose, in some measure, the defect of nourishment, when the body does not receive it in the usual way,

The SKIN is a most curious piece of delicate network, which is extended over the whole surface of the body, and covers and defends the various parts that lie under it; it is the organ of feeling,

and discovers to us, sleeping or waking, whatever touches it: And, being full of very small holes, called pores, cleanses the blood, by means of perspiration, from offensive humours; which, if they were not thrown off, would occasion diseases, and become destructive to the body.

And that so great a number of parts as the skin contains, variously mingled; hard and soft; fluid with fixed; solid with hollow; those in rest with those in motion; should be so far from hindering their several operations as all mutually to assist each other, and all to concur in the general design of the gracious Creator, the benefit and preservation of the whole, is an evident mark of great wisdom.

From this rude and very imperfect sketch of the principal parts of the human body, we see that it is "fearfully and wonderfully made;" regularly disposed, and most accurately proportioned in all its parts, which are furnished with every thing necessary, and placed in the manner best adapted to their several uses. No part of this divine structure is imperfect; none useless; none interferes with another. Every member, every sense, has its peculiar function, which it discharges in harmony with the rest; and all conspire to the health and preservation of life. Let us not, then, suppose that  
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any parts of our body are useless, because we are ignorant of their use ; but believe that, as what we do understand is wise, and gracious, and good, what we do not understand is wise, and gracious, and good also.

If, in the whole body, you change the form, or the situation, of any part ; if you diminish or increase its size, or attempt any alteration, you inevitably do mischief ; it would cease to answer the end, the moment it ceased to be what it is : There being nothing deficient ; nothing superfluous ; nothing that can be altered for the better.

It is also a wise and kind provision of the Creator that we are furnished by pairs, answering on each side one to another, with those organs of the body which are most useful, and most exposed to outward injury : (p) Two eyes, two ears, two hands,

(p) It would be prudent sometimes to suppose ourselves deprived of one of our limbs, or senses ; for then we should find that two hands, or two eyes, excel one as much in value, as in number ; and, even if we should not greatly feel the want of the lost part, the unsightliness of such a defect would alone be very disagreeable. Such considerations as these should teach us properly to value a blessing till then, perhaps, unthought of ; to esteem the perfection,

hands, two legs; not only for our convenience whilst we enjoy them, but that we might not be reduced, by the loss of one, to a destitute and defenceless state; might not be greatly obstructed in our improvements in knowledge; or rendered incapable of the pleasures of society.

Admire, then, O man, with the most profound humility, and the most heartfelt gratitude, the perfection and beauty of thy body; the admirable connection, harmony, and proportion of all its parts; its finished form and faultless order: Prostrate thyself before the throne of thy Creator, and adore the kind, paternal care discovered for its security and happiness. Destroy not this divinely contrived machine by intemperance. Remember that every violation of purity and temperance weakens thy body, and renders it less lasting; and that the best preservative of health is a regular and virtuous course of life. And, surely, when thou considerest the very many minute parts of which thy body is composed, and how prejudicial an obstruction in any one of them would be to the whole; that the stop-

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perfection of our bodies as a great happiness; to be careful to preserve it; and to acknowledge that we are indebted for the complete use of our limbs, and the full enjoyment of our senses, to the goodness of God.

page of a single wheel, in that vast assemblage of moving organs on which health depends, may destroy it, thou must be penetrated with an holy fear ; thou canst not avoid considering it as a miracle that thy body should be preserved (as thou usest it) for a single hour ; much more that, for a long course of years, it should be able to endure the hardships, the shocks, the blows and outrages which it suffers from thy frequent excesses, without being disordered, or rendered useless. Look up, therefore, with the most awful reverence, to the wise and beneficent Creator who hath framed thy body, the master-piece of his visible creation, so delicately, and at the same time so durably ; and, whilst thou enjoyest the comforts of this gracious formation, suffer not the grateful sense of it ever to be erased from thy heart.



IT has been the object of the editor, in this discourse, to adapt the observations of some eminent philosophers and divines to the capacities of common readers, for whose use this publication is principally intended.

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The following information was obtained from the records of the [illegible] Department, dated [illegible]:

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